

## CLAIMS

1. A device for determining the wetting of a wall by a liquid, characterized in that it comprises: a capacity (4) for the liquid; a control object (2) of the wall placed in the capacity; an emitter and a receiver (15, 16) of ultrasonic waves, and two waveguides (5, 6) passing through the capacity, located in extension, the emitter and receiver being respectively mounted on ends of the waveguides extending out of the capacity, and the object (2) being placed between the waveguides; the object (2) having a thickness selected for favouring the passing of waves from the emitter.

2. A device for determining the wetting of a wall by a liquid, characterized in that it comprises: a capacity (4) to the liquid; a control object (2) of the wall placed in the capacity; an emitter and a receiver of ultrasonic waves; and two waveguides passing through the capacity, located side-by-side, the emitter and the receiver being respectively mounted on ends of the waveguides extending out of the capacity, and the object (2) being placed in front of the waveguides, the object having a front surface selected for favouring reflections of the waves between the waveguides.

3. The device according to claim 1, characterized in that the capacity (4) is equipped with heating means and the waveguides with cooling means located outside the capacity.

4. The device according to claim 2, characterized in that the capacity (4) is equipped with heating means and the waveguides with cooling means located outside the capacity.

5. The device according to claim 3, characterized in that the cooling means consists of a case surrounding each of the waveguides between the capacity and either the emitter or the receiver.

5 6. The device according to claim 4, characterized in that the cooling means consists of a case surrounding each of the waveguides between the capacity and either the emitter or the receiver.

7. The device according to claim 1,  
10 characterized in that the waveguide is covered with a coating which favors wetting of the liquid in the capacity.

8. The device according to claim 2,  
15 characterized in that the waveguide is covered with a coating which favors wetting of the liquid in the capacity.

9. The device according to claim 3,  
20 characterized in that the waveguide is covered with a coating which favors wetting of the liquid in the capacity.

10. The device according to claim 4, characterized in that the waveguide is covered with a coating which favors wetting of the liquid in the capacity.

25 11. The device according to claim 1, wherein the device further comprises a sealing for the capacity and a heat insulation system around the waveguides.

12. The device according to claim 2, wherein the device further comprises a sealing for the capacity and  
30 a heat insulation system around the waveguides.

13. The device according to claim 3, wherein the device further comprises a sealing for the capacity and a heat insulation system around the waveguides.

14. The device according to claim 5, wherein the device further comprises a sealing for the capacity and a heat insulation system around the waveguides.

15. The device according to claim 5,  
5 characterized in that the sealing system comprises a flange positioned around a section of the waveguides and joined to a bracket or a sleeve attached to the capacity, or to the capacity itself; and the heat insulation system comprises a sleeve or insulating  
10 bellows extending between the flange and the cooling case.

16. The device according to claim 7,  
characterized in that the sealing system comprises a flange positioned around a section of the waveguides  
15 and joined to a bracket or a sleeve attached to the capacity, or to the capacity itself; and the heat insulation system comprises a sleeve or insulating bellows extending between the flange and the cooling case.

20 17. The device according to claim 11,  
characterized in that the sealing system comprises a flange positioned around a section of the waveguides and joined to a bracket or a sleeve attached to the capacity, or to the capacity itself; and the heat  
25 insulation system comprises a sleeve or insulating bellows extending between the flange and the cooling case.